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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,225	09/29/2003	Dennis A. Kramer	60,130-1898; 03MRA0456	2509
26096	7590	10/27/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			TORRES, MELANIE	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/674,225	KRAMER, DENNIS A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Melanie Torres	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 8/15/05.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Reichl et al.

Re claims 13-17, Reichl et al. discloses A distance sensor comprising: a magnet (11) having at least a north pole and a south pole, with an axis defined between said north and said south poles; and a Hall effect sensor (15) said Hall effect sensor and said magnet being mounted for movement relative to each other along a linear path (R) said linear path being non-parallel to said axis.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCann et al. in view of Reichl et al.

Re claims 1-11, 19 and 20, McCann et al. teach a disc brake actuator comprising a pair of pistons (24), each of said pair of pistons being driven to drive a brake pad (26) into engagement with an item to be braked, an adjustment mechanism for said pair of pistons, said adjustment mechanism including tappet gears (22) associated with each of said pair of pistons and driven to drive a threaded tappet, said threaded tappet in turn driving said pair of pistons said pair of pistons being constrained from rotation such that when said tappet gears are driven to rotate, a threaded connection between said gears and said pair of pistons causes said pair of pistons to move linearly and compensate for wear on said brake pad, an electric motor (40) for driving said tappet gears; and a displacement sensor (130) for sensing movement of at least one of said pair of pistons during braking operation, said displacement sensor providing feedback to a control for said electric motor, said control controlling said electric motor to drive said tappet gears and provide appropriate adjustment based upon an amount of movement sensed by said displacement sensor (column 6, lines 6-10). However, McCann et al. do not teach wherein said displacement sensor including a magnet having at least north and south poles, with an axis defined between said north and said south poles, and a Hall effect sensor movable relative to said magnet, and a path of movement between said Hall effect sensor and said magnet being defined such that said path of movement is linear and is non-parallel to said axis. Reichl et al. teach a displacement sensor (10) including a magnet (11) having at least north and south poles, with an axis defined between said

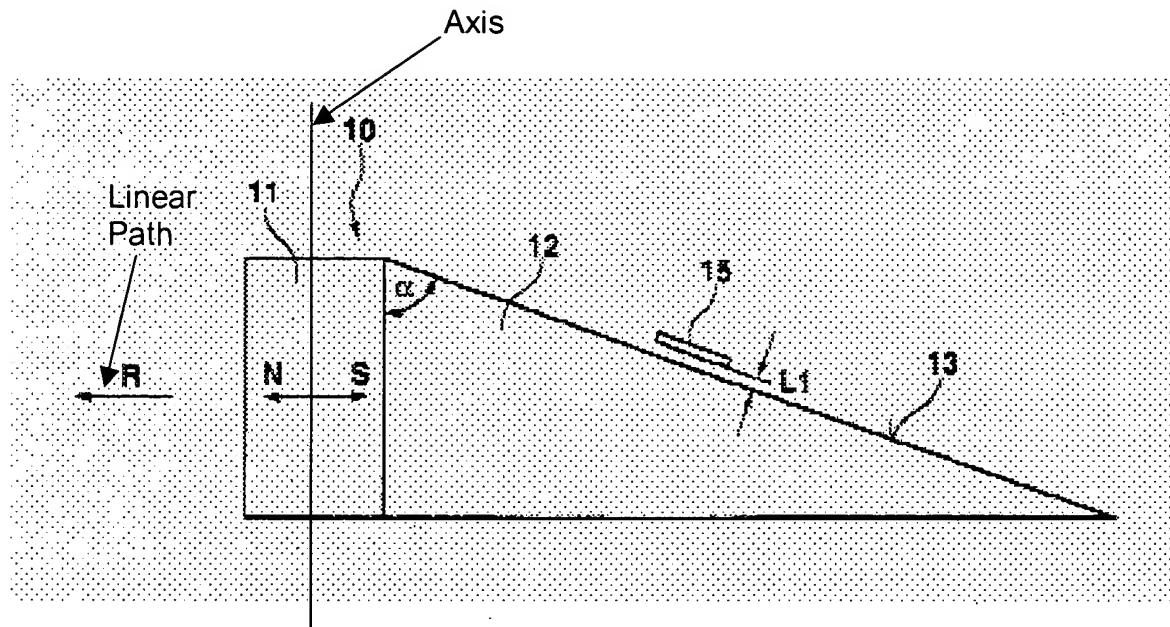
north and said south poles, and a Hall effect sensor (15) movable relative to said magnet, and a path of movement between said Hall effect sensor and said magnet being defined such that said path of movement is linear and is non-parallel to said axis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have replaced the displacement sensor of McCann et al. with the displacement sensor of Reichl et al. in order to reduce the complexity and number of parts of the sensor.

Re claims 12 and 18, McCann et al. as modified do not teach wherein the sensor is housed in plastic. It would have been an obvious matter of design choice to make the housing of plastic since applicant has not stated that this material solves any stated problem or is for any particular purpose and it appears that the sensor would perform equally well with a variety of materials.

#### ***Response to Arguments***

5. Applicant's arguments filed August 15, 2005 have been fully considered but they are not persuasive.

Applicant's definition of "an axis defined between said north and said south poles" is more specific than the claim language. As can be seen below, the Examiner maintains that a horizontal axis can be interpreted as being defined between the north and south poles. See below.



### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Torres whose telephone number is (571)272-7127. The examiner can normally be reached on Monday-Friday, 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571)272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT  
October 25, 2005

*Melanie Torres*  
Melanie Torres  
Primary Examiner  
10/25/05